Drilling Logs of Government Core Drills 1983

compiled by
Ian MacDougall and D.E. Polley

Nova Scotia

Department of
Mines and Energy

85-6334/

Nova Scotia

Department of Mines and Energy

Report 84-5

DRILLING LOGS

OF

GOVERNMENT CORE DRILLS

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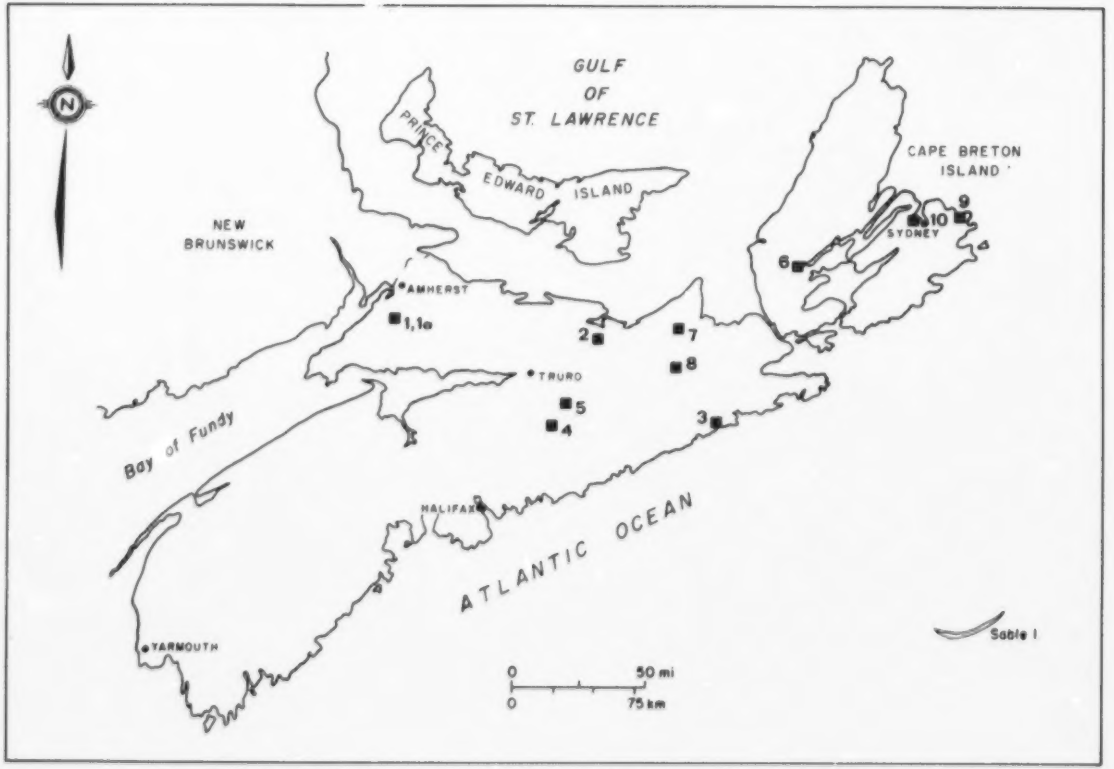
Honourable Joel R. Matheson, Q.C., Minister

John J. Laffin, P. Eng. Deputy Minister

Halifax, Nova Scotia
1984



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DRILLING LOGS OF GOVERNMENT CORE DRILLS 1983

Ian MacDougall[1] and D. E. Polley[2]

During the year 1983 the drills were used exclusively on Department of Mines and Energy projects. These included drilling for coal in Springhill, Cumberland County, New Glasgow area, Pictou County, and Donkin area, Cape Breton County; for Cretaceous deposits of clay and silica sand in Musquodoboit, Halifax County, Blues Mills, Inverness County, Iron Mines, Inverness County, and Upper Stewiacke, Colchester County; for geological and structural information on the Meguma Project in Holland Harbour, Guysborough County; for Carboniferous studies in Glen Road, Antigonish County, and Point Edward, Cape Breton County and for geological information in College Grant, Antigonish County. The total number of holes drilled was 76 with a total footage 20,587 feet or 6275.0 m.

Both systems of measurement were used (feet and metres) as recorded in this report. The following are drillers logs except where noted condensed geologists logs are used.

Again the authors would like to express appreciation to Mrs. Lois Tower and Mrs. Kathy Mills for their assistance in the preparation of this report.

In Springhill, Cumberland County drilling continued from 1982. There were 44 holes drilled plus 10 holes put down using the split tube sampler on the old mine waste dump. The drilling is for the Coal Inventory Program. Holes listed with SH before the number indicate that the hole was cored and geophysically logged whereas the others were not. All holes were located by transit survey and the co-ordinates and elevations are on file with the Nova Scotia Department of Mines and Energy. All holes are vertical (Fig. 1).

Record No. 7590

Hole No. 82-5A is located by Map Reference 21H/09D, Tract 21, Claim B.

Strata	Thickness (m)	Total Depth (m)
Dump material	8.0	8.0
Overburden	6.0	14.0
Mudstone, grey	12.0	26.0
Sandstone, grey	1.0	27.0
Mudstone, grey	25.0	52.0
Coal, black	1.0	53.0
Sandstone, grey	1.0	54.0

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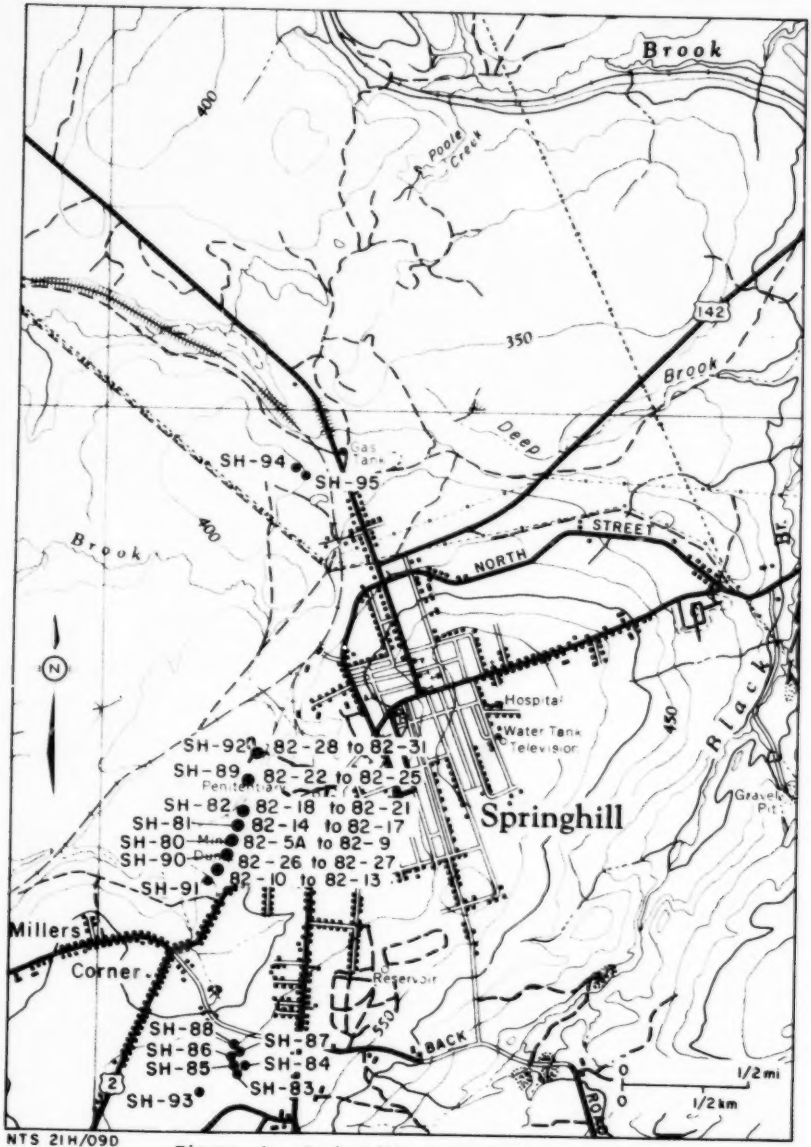


NTS 21H/09D

Figure 1. Springhill, Cumberland County

Record No. 7591

Hole No. 82-6 is located by Map Reference 21H/09D, Tract 21, Claim B.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0
Red clay and boulders	1.0	8.0
Coal, black	0.5	8.5
Red clay and boulders	5.5	14.0

Record No. 7592

Hole No. 82-6B is located by Map Reference 21H/09D, Tract 21, Claim B.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0
Red clay and boulders	1.0	8.0
Coal, black	0.5	8.5
Clay and boulders	5.5	14.0
Mudstone, grey	4.0	18.0
Coal	4.0	22.0
Mudstone, grey	1.0	23.0

Record No. 7593

Hole No. 82-7 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0
Red clay and boulders	10.0	17.0
Sandstone, grey	9.0	26.0
Mudstone, grey	9.0	35.0
Old workings	3.0	38.0

Record No. 7594

Hole No. 82-8 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.5	7.5
Overburden	6.5	14.0
Coal	2.8	16.8
Mudstone, grey	1.5	18.0

Record No. 7595

Hole No. 82-9 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	8.0	8.0
Overburden	6.0	14.0
Coal	1.8	15.8
Mudstone	1.2	17.0

Record No 7596
Hole No. 82-10 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	1.0	1.0
Overburden	1.5	2.5
Coal	1.5	4.0
Mudstone	1.0	5.0

Record No. 7597
Hole No. 82-11 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	1.0	1.0
Overburden	3.0	4.0
Coal	2.3	6.3
Mudstone	0.7	7.0

Record No. 7598
Hole No. 82-12 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	1.5	1.5
Overburden	6.5	8.0
Mudstone, grey	5.0	13.0
Coal	4.5	17.5
Mudstone, grey	0.5	18.0

Record No. 7599
Hole No. 83-13 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	1.5	1.5
Overburden	5.5	7.0
Mudstone	9.0	16.0
Old workings	2.0	18.0

Record No. 7600
Hole No. 83-14 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	6.0	6.0
Overburden	7.5	13.5
Coal	3.5	17.0

Record No. 7601
Hole No. 83-15 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	6.0	6.0
Overburden	10.0	16.0
Grey clay and boulders	4.0	20.0

Record No. 7602
Hole No. 83-16 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	6.0	6.0
Overburden	7.6	13.6
Coal	2.2	15.8
Mudstone	1.2	17.0

Record No. 7603
Hole No. 82-17 is located by Map Reference 21H/09D, Tract 21, Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0
Overburden	7.0	14.0
Sandstone and mudstone, grey	12.0	26.0
Coal	5.0	31.0
Mudstone, grey	1.0	32.0

Record No. 7604
Hole No. 82-18 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	2.0	2.0
Overburden	8.0	10.0
Clay, grey	2.0	12.0
Sandstone	2.0	14.0

Record No. 7605
Hole No. 82-19 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	4.0	4.0
Overburden	8.0	12.0
Clay, grey	1.0	13.0
Coal	2.5	15.5
Clay, grey	0.5	16.0

Record No. 7606
Hole No. 82-20 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	5.0	5.0
Overburden	9.0	14.0
Coal	4.5	18.5
Clay, grey	1.5	20.0

Record No. 7607
Hole No. 82-21 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	1.0	1.0
Overburden	8.0	9.0
Clay and mudstone, grey	1.0	10.0
Mudstone and sandstone, grey	18.0	28.0
Sandstone and old workings	5.0	33.0

Record No. 7608
Hole No. 82-22 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.0	6.0
Mudstone and sandstone, grey	8.0	14.0
Clay and mudstone, grey	9.0	23.0
Sandstone, grey	6.5	29.5

Record No. 7609
Hole No. 82-23 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.0	6.0
Coal	1.0	7.0
Mudstone, grey	1.0	8.0
Clay and sandstone, grey	3.0	11.0

Record No. 7610
Hole No. 82-24 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.0	6.0
Coal	3.5	9.5
Clay and mudstone	1.5	11.0

Record No. 7611
Hole No. 82-25 is located by Map Reference 21H/09D, Tract 21, Claim G.

Strata	Thickness (m)	Total Depth (m)
Overburden	7.0	7.0
Sandstone, grey	15.0	22.0
Hit old workings		

Record No. 7612
Hole No. 82-26 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	8.0	8.0
Overburden	4.5	12.5
Mudstone, grey	2.0	14.0

Record No. 7613
Hole No. 82-27 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Overburden	13.0	13.0
Mudstone and clay	4.6	17.6
Coal	4.0	21.6
Clay, grey	1.4	23.0

Record No. 7614
Hole No. 82-28 is located by Map Reference 21H/09D, Tract 21, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Clay and mudstone, grey	4.0	8.0
Mudstone, grey	5.0	13.0

Record No. 7615
Hole No. 82-29 is located by Map Reference 21H/09D, Tract 21, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Clay and mudstone, grey	7.0	11.0
Mudstone, grey	6.3	17.3
Coal	4.0	21.3
Clay, grey	0.7	22.0

Record No. 7616
Hole No. 82-30 is located by Map Reference 21H/09D, Tract 21, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Clay, grey	1.0	5.0
Sandstone, grey	6.0	11.0
Clay and mudstone, grey	6.0	17.0
Mudstone and old workings	3.0	20.0

Record No. 7617
Hole No. 82-31 is located by Map Reference 21H/09D, Tract 21, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Coal	0.5	4.5
Clay, grey	0.5	5.0

Record No. 7618
Hole SH-80 is located by Map Reference 21H/09D, Tract 21, Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	8.0	8.0
Clay and boulders	5.0	13.0
Sandstone, grey	4.0	17.0
Mudstone, grey	7.0	24.0
Coal	4.0	28.0
Mudstone, grey	6.0	34.0

Record No. 7619
Hole SH-81 is located by Map Reference 21H/09D, Tract 21, Claim F.
Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Dump and overburden	18.80	18.80
Mudstone, siltstone and sandstone, grey	4.00	22.87
Lost core	0.03	22.90
Coal	0.68	23.58
Lost core	0.29	23.87
Coal	0.56	24.43
Lost core	0.40	24.83
Coal	0.66	25.49
Shale, coaly	0.01	25.50
Coal	0.14	25.64
Shale	0.03	25.67
Coal	0.49	26.16
Shale	0.02	26.18

Coal	0.58	26.76
Lost core	0.10	26.86
Shale, coaly	0.04	26.90
Coal, shaly	0.19	27.09
Shale, coaly	0.03	27.12
Lost core	0.10	27.22
Mudstone, sandstone, siltstone, grey	5.97	33.19

Record No. 7620

Hole SH-82 is located by Map Reference 21H/09D, Tract 21, Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Dump material and overburden	16.68	16.68
Sandstone, mudstone and siltstone, grey	9.87	26.55
Lost core	0.41	26.96
Coal No. 3 seam	5.08	31.04
Lost core	0.11	31.15
Clay	1.03	32.18
Lost core	0.19	32.37
Mudstone, sandstone and siltstone, grey	4.63	36.90

Record No. 7621

Hole No. SH-83 is located by Map Reference 21H/09D, Tract 4, Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	8.88	8.88
Sandstone, grey	0.50	9.38
Coal, shaly	0.02	9.40
Shale, black	0.04	9.44
Coal	0.11	9.55
No core	0.13	9.68
Mudstone, grey	0.03	9.71
Shale, black	0.03	9.74
No core	0.06	9.80
Coal	0.14	9.94
Shale, black	0.02	9.96
Coal	0.05	10.01
Shale	0.04	10.05
Coal	0.14	10.19
Shale, black	0.03	10.22
Coal	0.28	10.50
Mudstone, grey	0.02	10.52
Coal	0.05	10.57
No core	0.24	10.81
Coal	0.05	10.86
Mudstone, grey	0.12	10.98
Shale, black	0.04	11.02
No core	0.11	11.13
Coal	0.19	11.32
Shale, black and grey	0.06	11.38

Coal	0.10	11.48
Shale, coaly	0.10	11.58
Mudstone, grey	0.05	11.63
Coal	0.07	11.70
Shale, coaly, black	0.10	11.80
Coal	0.17	11.97
Shale, black, coaly	0.04	12.01
Coal	0.11	12.12
Sandstone and mudstone, grey	1.95	14.07
Shale, black, coaly	0.15	14.22
Coal	0.17	14.39
Mudstone, grey	0.13	14.52
Shale, black	0.17	14.69
Coal	0.11	14.80
Mudstone, grey	0.76	15.56
Shale, black, dark grey	0.59	16.15
Siltstone, grey	2.85	19.00

Record No. 7622

Hole N. SH-84 is located by Map Reference 21H/09D, Tract 4, Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	9.49	9.49
Mudstone, dark grey	1.64	11.13
Coal	0.02	11.15
Shale, black and grey	0.04	11.19
Coal	0.19	11.38
Shale, black, coaly	0.04	11.42
Coal	0.11	11.53
Shale, black and grey	0.02	11.55
Coal	0.03	11.58
Mudstone, grey	0.06	11.64
Shale, black, coaly	0.05	11.69
Coal	0.25	11.94
Mudstone, grey	0.02	11.96
Coal	0.41	12.37
Mudstone, grey and black	0.04	12.41
Coal	0.32	12.73
Mudstone, grey and black	0.05	12.78
Shale, black, coaly	0.12	12.90
Mudstone, grey and black	0.17	13.07
Shale, black, coaly	0.02	13.09
Coal	0.28	13.37
Shale, coaly	0.07	13.44
Coal	0.06	13.50
Mudstone, grey	0.02	13.52
Shale, black, coaly	0.04	13.56
Coal	0.06	13.62
Shale, black	0.08	13.70
Coal	0.09	13.79
Mudstone, grey	0.02	13.81
Coal	0.05	13.86
Mudstone, grey	0.04	13.90

Coal	0.10	14.00
Shale, black, coaly	0.07	14.07
Coal	0.12	14.19
Siltstone, sandstone and mudstone, grey	1.62	15.81
Coal	0.15	15.96
Mudstone	0.32	16.28
Coal	0.20	16.48
Siltstone, mudstone, shale and sandstone, grey and black	2.25	18.73

Record No. 7623

Hole SH-85 is located by Map Reference 21H/09D, Tract 4, Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	7.48	7.48
Sandstone	0.56	8.04
No core	0.27	9.31
Mudstone, grey	0.37	10.68
No core	0.40	11.08
Coal	0.24	11.32
Mudstone, grey	0.10	11.42
No core	0.31	11.73
Coal	0.16	11.89
Mudstone, grey to black	0.11	12.00
Shale, black, coaly	0.05	12.05
Coal	1.07	13.12
Shale, black and grey	0.03	13.15
Coal	0.20	13.35
Mudstone	0.07	13.42
Shale, black, coaly	0.03	13.45
Coal	0.25	13.70
Mudstone, black	0.03	13.73
Coal	0.13	13.86
Shale, black, coaly	0.11	13.97
Coal	0.11	14.08
Shale, grey and black	0.06	14.14
Coal, shaly	0.21	14.35
Shale, black, coaly	0.04	14.39
Coal	0.11	14.50
No core	0.14	14.64
Sandstone, grey	0.07	14.71
Coal	0.05	14.76
Sandstone, grey	0.04	14.80
Mudstone and siltstone, grey	1.14	15.94
Coal	0.28	16.22
Mudstone and shaly coal	0.38	16.50
Coal	0.15	16.65
Siltstone, shale, sandstone and mudstone	4.95	21.60

Record No. 7624

Hole No. SH-86 is located by Map Reference 21H/09D, Tract 4, Claim G.
Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	9.99	9.99
No core	0.12	10.11
Coal	0.44	10.55
Mudstone, grey	0.05	10.60
Coal	0.07	10.67
Mudstone, grey	0.04	10.71
Shale, coaly	0.02	10.73
Coal	0.18	10.91
Shale, coaly	0.02	10.93
Coal	0.89	11.82
Mudstone and shale	0.28	12.10
No core	0.12	12.22
Coal	0.18	12.40
Shale, coaly	0.14	12.54
Coal	0.06	12.60
Shale, black, coaly	0.05	12.65
Coal	0.03	12.68
Shale and mudstone, black	0.09	12.77
Coal, shaly	0.03	12.80
Shale, black, coaly	0.05	12.85
Coal	0.12	12.97
Shale, coaly	0.02	12.99
Coal	0.06	13.05
Shale, coaly	0.02	13.07
Coal	0.15	13.22
Shale, coaly	0.06	13.28
Coal	0.18	13.46
Sandstone, mudstone, shale and siltstone, grey and black	5.26	18.72

Record No. 7625

Hole No. SH-87 is located by Map Reference 21H/09D, Tract 4, Claim G.
Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.67	6.67
Siltstone, grey	0.03	6.70
No core	0.72	7.42
Coal	0.33	7.75
Mudstone, grey	0.03	7.78
Coal	0.52	8.30
Shale, coaly	0.05	8.35
No core	0.09	8.44
Coal	0.34	8.78
Shale, black, coaly	0.16	8.94
Coal	0.25	9.19
Shale, black, coaly	0.03	9.22

Coal	0.19	9.41
No core	0.23	9.64
Shale, coaly	0.04	9.68
Coal, shaly	0.06	9.74
Shale, black, coaly	0.04	9.78
Mudstone, grey	0.02	9.80
Coal	0.24	10.04
Mudstone, grey	0.03	10.07
No core	0.11	10.18
Coal, shaly	0.11	10.29
Shale, siltstone and mudstone	0.99	11.28
Coal	0.33	11.61
Shale, grey and black	0.30	11.91
Coal	0.16	12.07
Mudstone and sandstone, grey	3.22	15.29

Record No. 7626

Hole SH-88 is located by Map Reference 21H/09D, Tract 4, Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.70	6.70
Mudstone, grey	2.54	9.24
Coal, shale and mudstone bands (No. 3 seam)	3.42	12.66
Shale, mudstone, sandstone	0.76	13.42
Coal	0.82	14.24
Mudstone, grey	0.39	14.63
Shale, coaly	0.59	15.22
Sandstone, grey	0.60	15.82
Mudstone and siltstone	6.47	22.39

Record No. 7627

Hole SH-89 is located by Map Reference 21H/09D, Tract 2', Claim G. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Dump and overburden	7.30	7.30
Sandstone and siltstone, grey	12.37	19.67
Lost core	0.87	20.54
Coal No. 3 seam	0.19	20.73
Shale, coaly	0.03	20.76
Lost core	0.16	20.92
Coal	0.53	21.45
Mudstone, grey	0.15	21.60
Lost core	0.08	21.68
Coal	1.64	23.32
Lost core	0.64	23.96
Mudstone, grey	1.30	25.26
Limestone, grey	0.09	25.35
Mudstone, grey	0.54	25.89
Sandstone, grey	0.39	26.28

Record No. 7628

Hole No. SH-90 is located by Map Reference 21H/09D, Tract 21, Claim C. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Coal dump material	7.60	7.60
Overburden	4.33	11.93
Sandstone and siltstone, grey	5.26	17.19
Lost core	0.58	17.77
Coal No. 3 seam	3.53	21.30
Clay, grey	0.06	21.36
Lost core	1.60	22.96
Mudstone and sandstone, grey	2.85	25.81

Record No. 7629

Hole No. SH-91 is located by Map Reference 21H/09D, Tract 21, Claim C. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	7.38	7.38
Lost core	0.16	7.54
Coal No. 3 seam	1.46	9.00
Lost core	0.74	9.74
Coal	0.26	10.00
Mudstone, siltstone, sandstone, grey	1.60	11.60

Record No. 7630

Hole No. SH-92 is located by Map Reference 21H/09D, Tract 21, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.30	6.30
Coal	1.84	8.14
Coal, with clay and shale	2.53	10.67
Clay, sandstone, mudstone and siltstone	5.78	16.45

Record No. 7631

Hole SH-93 is located by Map Reference 21H/09D, Tract 4, Claim C. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	1.50	1.50
Siltstone and mudstone	7.21	8.71
Coal	0.20	8.91
Mudstone, siltstone	13.93	22.84
Coal	0.19	23.03
Mudstone and sandstone	17.73	40.76
Coal	1.69	42.45

Mudstone and sandstone	3.94	46.39
Coal	0.18	46.57
Mudstone and sandstone	4.51	61.08
Coal	1.49	62.57
Siltstone, sandstone, mudstone	7.07	69.64

Record No. 7632

Hole SH-94 is located by Map Reference 21H/09D, Tract 28, Claim P. Condensed from geologist's log.

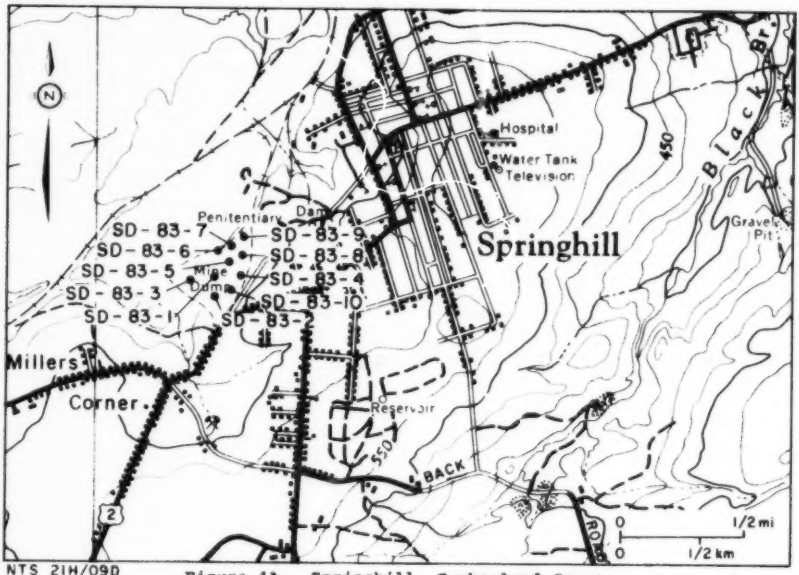
Strata	Thickness (m)	Total Depth (m)
Overburden	5.79	5.79
Sandtone	4.71	10.50
Coal	0.24	10.74
Mudstone, sandstone, siltstone	15.99	26.73
Coal	0.15	26.88
Siltstone, sandstone, mudstone and clay	6.44	33.32
Coal	0.14	33.46
Mudstone, clay, sandstone and siltstone	4.52	47.98
Coal	0.40	48.38
Mudstone, shale, sandstone and siltstone	42.05	90.43
Coal	0.23	90.66
Mudstone	0.15	90.81
Coal	0.06	90.87
Mudstone, clay, sandstone	62.89	153.76
Limestone	1.53	155.29
Mudstone, siltstone	0.69	161.98
Limestone, grey	0.17	162.15
Mudstone, sandstone, siltstone	15.76	177.91

Record No. 7633

Hole SH-95 is located by Map Reference 21H/09D, Tract 28, Claim J. Condensed from geologist's log.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.00	4.00
Clay and mudstone	2.00	6.00
Sandstone, mudstone, siltstone	18.00	24.80
Mudstone, thin coal bands	1.76	26.56
Clay, mudstone, sandstone	8.79	35.35
Coal	0.44	35.79
Mudstone, sandstone	4.22	50.01
Coal (No. 6 seam)	2.00	52.01
Mudstone	3.62	55.63
Coal	0.04	55.67
Mudstone	0.18	55.85
Coal	0.36	56.21
Sandstone	0.32	56.53
Siltstone	0.25	56.78

The split tube sampler was used on the Springhill coal dump for ten holes. They are located by Map Reference 21H/09D, Tract 21 (Fig. 1A)



NTS 21H/09D

Figure 1A. Springhill, Cumberland County

Record No. 7634
Hole SD-83-1 is in Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	10.0	10.0

Record No. 7635
Hole SD-83-2 is in Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.5	7.5

Record No. 7636
Hole SD-83-3 is in Claim C.

Strata	Thickness (m)	Total Depth (m)
Dump material	11.0	11.0

Record No. 7637
Hole SD-83-4 is in Claim B.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0

Record No. 7638
Hole SD-83-5 is in Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.5	7.5

Record No. 7639
Hole SD-83-6 is in Claim F.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0

Record No. 7640
Hole SD-83-7 is in Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0

Record No. 7641
Hole SD-83-8 is in Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	7.0	7.0

Record No. 7642
Hole SD-83-9 is in Claim G.

Strata	Thickness (m)	Total Depth (m)
Dump material	6.0	6.0

Record No. 7643
Hole SD-83-10 is in Claim B.

Strata	Thickness (m)	Total Depth (m)
Dump material	8.0	8.0

Drill No. 18 was used on the Coal Inventory Program from January 11 to July 14, 1983 to drill two holes in Pictou County. P-54 is located near the New Glasgow-Stellarton town line and P-55 is located about three miles west on the Westville Highway. Their locations were surveyed and are on file with the Nova Scotia Department of Mines and Energy. Both holes are vertical (Fig. 2).

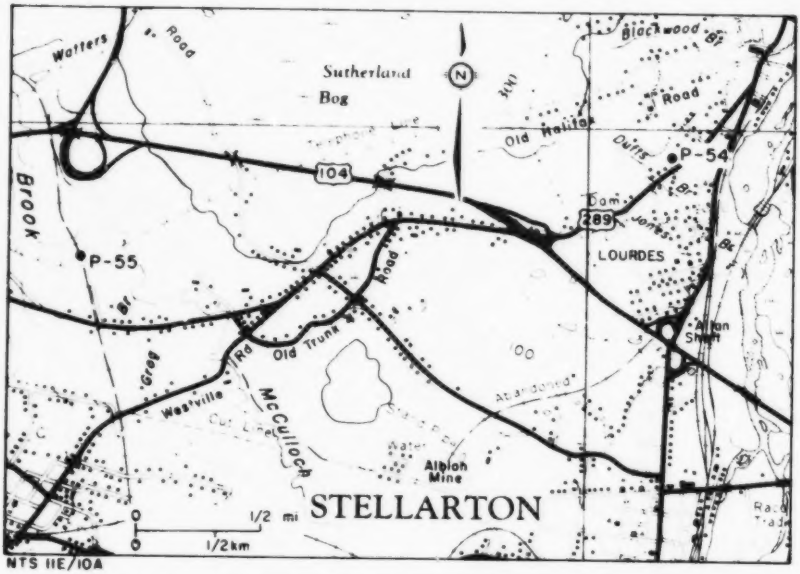


Figure 2. New Glasgow-Stellarton, Westville, Pictou County

Record No. 7644

Hole No. P-54 is located by Map Reference 11E/10A, Tract 65, Claim O.

Strata	Thickness (m)	Total Depth (m)
Overburden	3.0	3.0
Shale, black and grey	189.0	192.0
Coal	8.0	200.0
Shale	43.0	243.0
Coal	7.0	250.0
Shale	13.0	263.0
Coal	5.0	268.0
Shale	5.0	273.0
Coal	5.0	278.0
Shale	35.0	313.0
Shale with coal bands	57.0	370.0

Shale	12.0	382.0
Coal	2.0	384.0
Shale	7.0	391.0
Coal	3.0	394.0
Shale	36.0	430.0
Shale grey and black	32.0	462.0
Coal	6.0	468.0
Shale, grey and black	82.0	550.0
Shale, grey	36.0	586.0
Shaly sandstone, grey	150.0	736.0
Shale, red	56.8	792.8
Shale, red and grey	132.6	925.4
Shale, red	91.7	1017.1

Record No. 7645

Borehole No. P-55 is located by Map Reference 11E/10A, Tract 63, Claim E.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.4	6.4
Shale, grey	6.6	13.0
Shale, red and grey	66.0	79.0
Shale and sandstone, grey	6.0	85.0
Shale, grey and red	21.0	106.0
Shale, grey and black	21.0	127.0
Shale, grey, black and red	39.0	166.0
Shale, grey and red	141.0	307.0
Shale, grey	69.0	376.0
Shale, grey and red	9.0	385.0
Shale, grey (fault zone)	27.0	412.0
Sandstone, grey	8.0	420.0
Shale, grey and red	42.3	462.3
Conglomerate, red	25.3	487.6

From February 21 to May 6, 1983, three holes were drilled on the Meguma Project in Holland Harbour, Guysborough County. The purpose was for structural and geological information. Originally it was planned to drill one hole 1500 feet deep on an angle of 30° on a bearing north. However, because the hole changed dip so quickly, three shallower holes were drilled to obtain maximum stratigraphic section. The holes were located by transit survey and the locations are on file with the Nova Scotia Department of Mines and Energy (Fig. 3).

Record No. 7646

Hole No. 1 is located by Map Reference 11F/04B, Tract 74, Claim E. It was started on an angle of 30° on a bearing north.

Strata	Thickness (ft.)	Total Depth (ft.)
Overburden	10.0	10.0
Quartzite	432.0	442.0

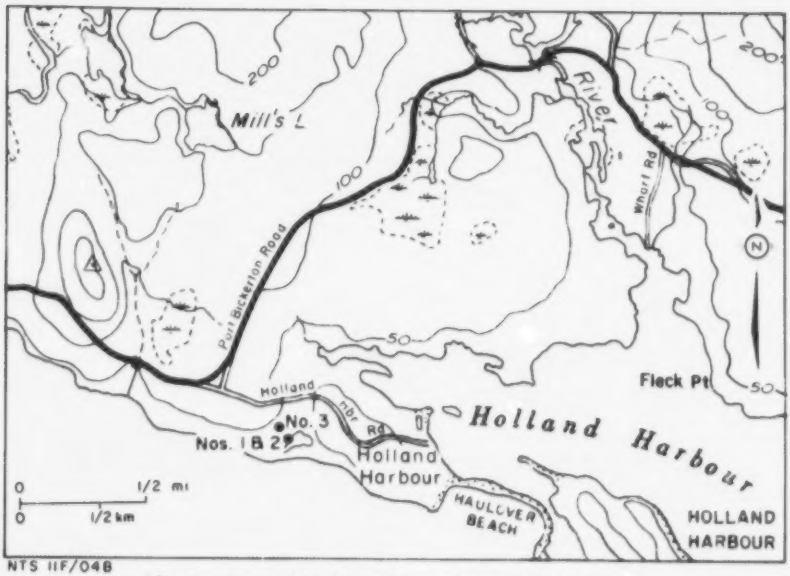


Figure 3. Holland Harbour, Guysborough County

Record No. 7647

Hole No. 2 is located by Map Reference 11F/04B, Tract 74, Claim E. It was started on an angle of 45° on a bearing north.

Strata	Thickness (ft.)	Total Depth (ft.)
Overburden	10.0	10.0
Quartzite	326.0	336.0

Record No. 7648

Hole No. 3 is located by Map Reference 11F/04B, Tract 75, Claim J. It was started on an angle of 57° on a bearing north.

Strata	Thickness (ft.)	Total Depth (ft.)
Overburden	10.0	10.0
Quartzite	946.0	956.0

From June 16 to September 29, 1983 drills 19 and 20 were used to test for Cretaceous deposits of clay and silica sand. The following seven holes were drilled: Upper Musquodoboit, Halifax County (1), Upper Stewiacke, Colchester County (3), Iron Mines, Inverness County (2), and Blue Mills,

Inverness County (1). All holes are vertical and the surveyed locations are on file with Nova Scotia Department of Mines and Energy (Figs. 4, 5, and 6).

Record No. 7649

Hole No. UM-1, Upper Musquodoboit, Halifax County, is located by Map Reference 11E/03A, Tract 95, Claim G.

Strata	Thickness (m)	Total Depth (m)
Overburden	10.0	10.0
Clay and sand, red and grey	187.0	197.0

Record No. 7650

Hole No. US-1, Upper Stewiacke, Colchester County, is located by Map Reference 11E/02C, Tract 61, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	35.0	35.0

Record No. 7651

Hole No. US-2, Upper Stewiacke, Colchester County, is located by Map Reference 11E/02C, Tract 61, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	39.0	39.0
Shale, clay and limestone	8.0	47.0

Record No. 7652

Hole No. US-3, Upper Stewiacke, Colchester County, is located by Map Reference 11E/02C, Tract 84, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	75.0	75.0
Clay and sand	48.0	123.0

Record No. 7653

Hole No. IM-1, Iron Mines, Inverness County, is located by Map Reference 11F/14D, Tract 56, Claim P.

Strata	Thickness (m)	Total Depth (m)
Overburden	56.0	56.0

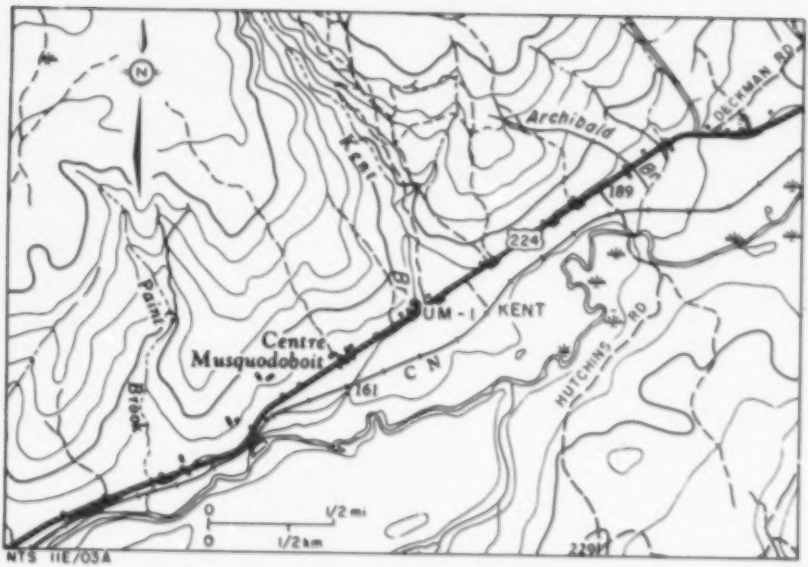


Figure 4. Upper Musquodoboit, Halifax County

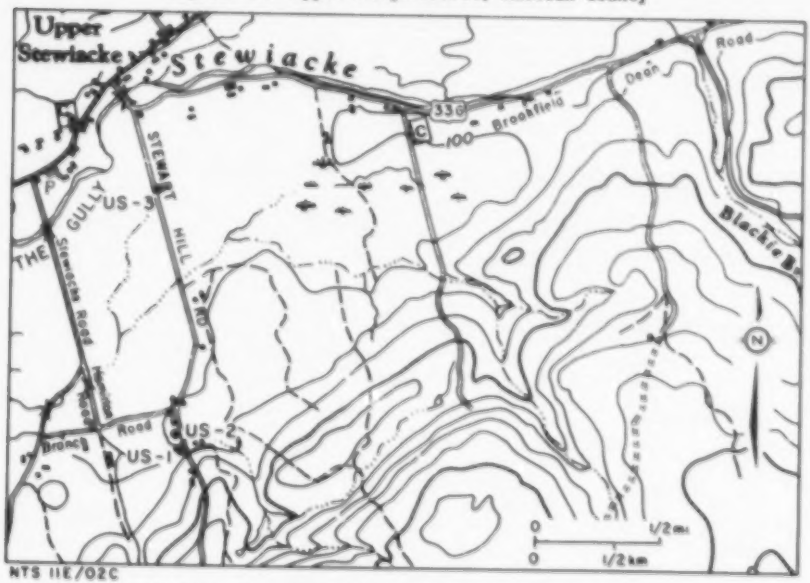


Figure 5. Upper Stewiacke, Colchester County

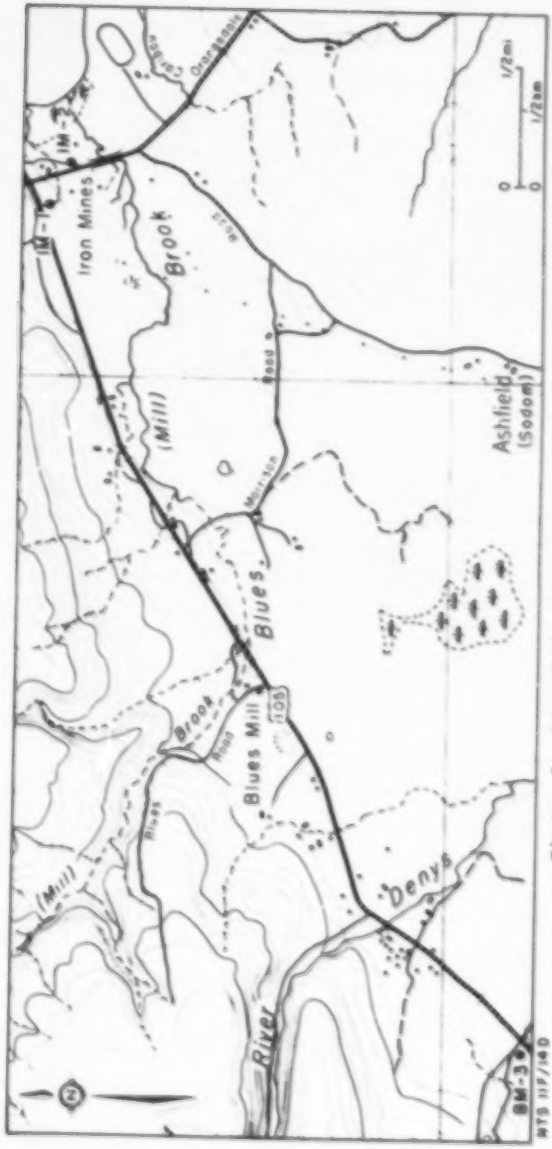


Figure 6. Iron Mines, Blues Mills, Inverness County

Record No. 7654

Hole No. IM-2, Iron Mines, Inverness County is located by Map Reference 11F/14D, Tract 56, Claim J.

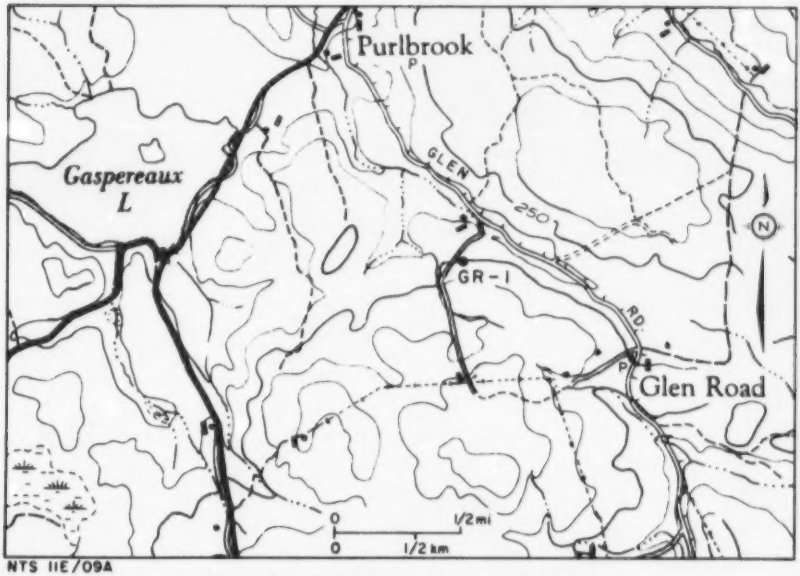
Strata	Thickness (m)	Total Depth (m)
Sand and clay	72.0	72.0
Mudstone	2.0	74.0

Record No. 7655

Hole No. BM-3, Blues Mills, Inverness County is located by Map Reference 11F/14D, Tract 35, Claim L.

Strata	Thickness (m)	Total Depth (m)
Overburden	19.0	19.0
Clay	93.0	112.0
Gypsum and clay	18.0	130.0

From July 18 to October 21, 1983, the No. 18 drill was used to drill a hole in Glen Road, Antigonish County. The purpose of drilling was for geological information on the Carboniferous Basin. The hole was drilled to a depth of 846.7 m and is vertical. The surveyed location is on file with Nova Scotia Department of Mines and Energy (Fig. 7).



NTS 11E/09A

Figure 7. Glen Road, Antigonish County

Record No. 7656

Hole No. GR-1 is located by Map Reference 11E/09A, Tract 47, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	10.6	10.6
Limestone	15.4	26.0
Shale, red	147.0	173.0
Anhydrite, grey	21.0	194.0
Limestone, grey	15.0	209.0
Shale, red	204.0	413.0
Limestone, grey	12.0	425.0
Shale, red	120.0	545.0
Shale, grey and red	12.0	557.0
Shale, grey, hit some salt	15.0	572.0
Anhydrite, limestone and salt, grey and red	15.0	587.0
Salt and anhydrite	6.0	593.0
Anhydrite, grey	217.0	810.0
Anhydrite and conglomerate	15.4	825.4
Conglomerate	21.3	846.7

From October 12 to the end of 1983 drilling was done in College Grant, Antigonish County. By the end of the calendar year two holes were drilled and the third hole was started. This report contains logs of holes LC-83-1 to LC-83-3 inclusive. Since the drilling will be continuing into 1984, logs of further drilling will be recorded in the 1984 report. The purpose of drilling is for geological information (Fig. 8).

Record No. 7657

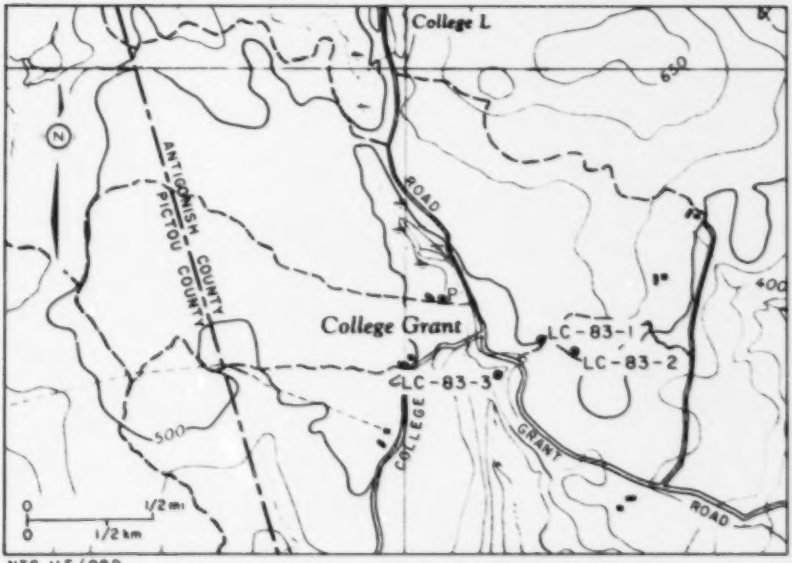
Hole No. LC-83-1 is located by Map Reference 11E/08D, Tract 21, Claim P. It is angled at 45° on a bearing 174° ast.

Strata	Thickness (m)	Total Depth (m)
Overburden	3.0	3.0
Siltstone	174.7	177.7
Limestone	21.3	199.0

Record No. 7658

Hole No. LC-83-2 is located by Map Reference 11E/08D, Tract 21, Claim P. It is angled at 45° on a bearing of 170° ast.

Strata	Thickness (m)	Total Depth (m)
Overburden	16.0	16.0
Siltstone	33.4	49.4



NTS 11E/08D

Figure 8. College Grant, Antigonish County

Record No. 7659

Hole No. LC-83-3 is located by Map Reference 11E/08D, Tract 21, Claim L. It is angled at 45° on a bearing of 172° ast.

Strata	Thickness (m)	Total Depth (m)
Overburden	13.0	13.0
Diabase	51.0	64.0
Limestone	43.9	107.9
Diabase	1.2	109.1
Limestone	2.2	111.3
Siltstone, red	39.3	150.6

From October 31 to December 6, 1983, the No. 9 drill was used on the Coal Inventory Program to drill five holes in the Donkin area, Cape Breton County. The purpose of drilling was to prove coal reserves on the McRury seam. All holes are vertical and the surveyed locations are on file with the Nova Scotia Department of Mines and Energy (Fig. 9).

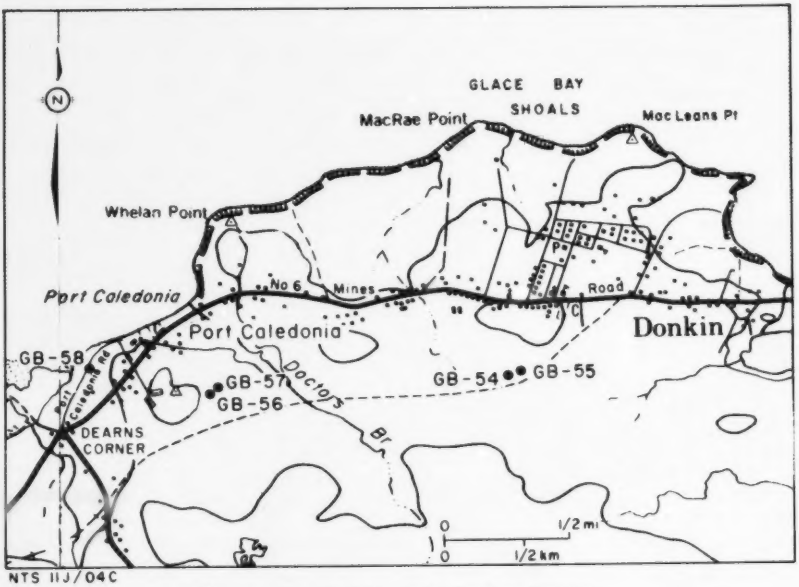


Figure 9. Donkin, Cape Breton County

Record No. 7660

Hole No. GB-54 is located by Map Reference 11J/04C, Tract 42, Claim Q.

Strata	Thickness (m)	Total Depth (m)
Overburden	2.0	2.0
Clay and sand, grey	7.0	9.0
Sandstone and mudstone, grey	62.0	71.0
Mudstone	5.0	76.0
Coal	0.2	76.2
Mudstone and sandstone, grey	3.8	80.0
Coal	0.5	80.7
Mudstone and sandstone	14.3	95.0
Mudstone, grey	6.0	101.0
Coal	0.1	101.1
Mudstone, grey and red	7.9	109.0

Record No. 7661

Hole No. GB-55 is located by Map Reference 11J/04C, Tract 42, Claim Q.

Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Mudstone, grey	2.0	6.0

Coal	1.0	7.0
Mudstone and sandstone, grey	12.0	19.0

Record No. 7662

Hole NO. GB-56 is located by Map Reference 11J/04C, Tract 41, Claim K.

Strata	Thickness (m)	Total Depth (m)
Overburden	6.0	6.0
Clay and mudstone	2.0	8.0
Mudstone	12.5	20.5
Coal	1.0	21.5
Mudtone and sandstone, grey	16.5	38.0
Sandstone, grey	48.0	86.0
Coal	0.1	86.1
Mudstone and sandstone	7.9	94.0
Mudstone	7.0	101.0
Coal	0.5	101.5
Mudstone and sandstone	1.5	112.0
Mudstone, grey	16.0	128.0
Coal	0.2	128.2
Mudstone, grey	3.8	132.0

Record No. 7663

Hole No. GB-57 is located by Map Reference 11J/04C, Tract 41, Claim P.

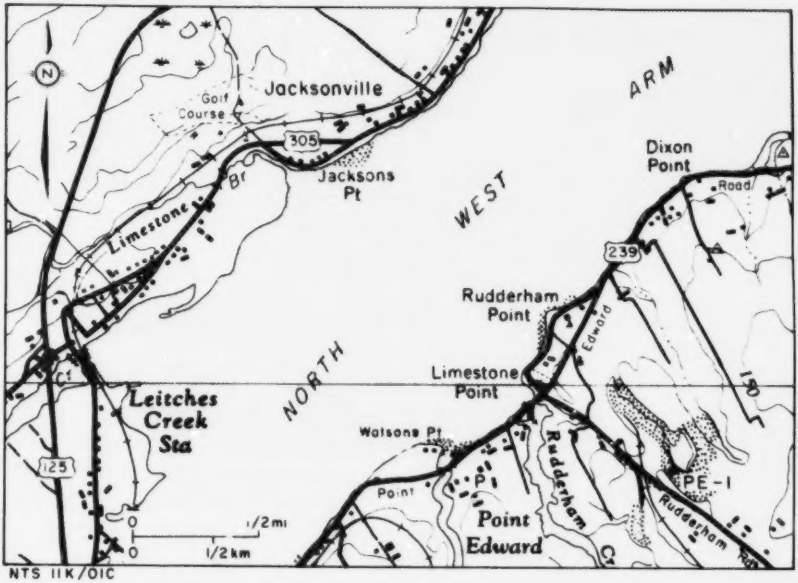
Strata	Thickness (m)	Total Depth (m)
Overburden	4.0	4.0
Clay, grey	1.0	5.0
Mudstone and sandstone, grey	15.0	20.0
Mudstone, grey	9.0	29.0
Coal	1.0	30.0
Mudstone, grey	4.0	34.0

Record No. 7664

Hole No. GB-58 is located by Map Reference 11J/04C, Tract 41, Claim N.

Strata	Thickness (m)	Total Depth (m)
Overburden	3.0	3.0
Clay, grey	2.0	5.0
Mudstone, grey	12.0	17.0
Mudstone and sandstone, grey	20.0	37.0
Coal	1.5	38.5
Mudstone, grey	2.5	41.0
Mudstone, grey	11.0	52.0

On November 2, 1983, No. 18 drill was moved to Point Edward, Cape Breton County to start drilling a hole for Carboniferous Studies in that area. The hole was not completed until February 23, 1984. The drillers log of the complete hole is contained in this report. The survey of location of this hole is on file with the Nova Scotia Department of Mines and Energy. It is vertical and is located by Map Reference 11K/01C, Tract 25, Claim K (Fig. 10).



NTS 11K/01C

Record No. 7665
Hole No. PE-1.

Strata	Thickness (m)	Total Depth (m)
Limestone, brown	7.3	7.3
Shale, red	9.0	34.3
Shale and conglomerate, red	33.0	67.3
Conglomerate, red	144.0	211.3
Shale, red and grey	15.0	226.3
Shale, grey	33.0	259.3
Conglomerate, red	495.0	754.3

APPENDIX I

RECORD OF DRILLHOLES

BY

RECORD NUMBER

Record No.	Date of Boring	Object of Boring	Location Of Borehole	Depth	
				Feet	Metres
7590	1983	Coal	Springhill, Cumberland County		54.0
7591	1983	Coal	Springhill, Cumberland County		14.0
7592	1983	Coal	Springhill, Cumberland County		23.0
7593	1983	Coal	Springhill, Cumberland County		38.0
7594	1983	Coal	Springhill, Cumberland County		18.0
7595	1983	Coal	Springhill, Cumberland County		17.0
7596	1983	Coal	Springhill, Cumberland County		5.0
7597	1983	Coal	Springhill, Cumberland County		7.0
7598	1983	Coal	Springhill, Cumberland County		18.0
7599	1983	Coal	Springhill, Cumberland County		18.0
7600	1983	Coal	Springhill, Cumberland County		17.0
7601	1983	Coal	Springhill, Cumberland County		20.0
7602	1983	Coal	Springhill, Cumberland County		17.0
7603	1983	Coal	Springhill, Cumberland County		32.0
7604	1983	Coal	Springhill, Cumberland County		14.0
7605	1983	Coal	Springhill, Cumberland County		16.0
7606	1983	Coal	Springhill, Cumberland County		20.0
7607	1983	Coal	Springhill, Cumberland County		33.0
7608	1983	Coal	Springhill, Cumberland County		29.5
7609	1983	Coal	Springhill, Cumberland County		11.0
7610	1983	Coal	Springhill, Cumberland County		11.0
7611	1983	Coal	Springhill, Cumberland County		22.0
7612	1983	Coal	Springhill, Cumberland County		14.0
7613	1983	Coal	Springhill, Cumberland County		23.0
7614	1983	Coal	Springhill, Cumberland County		13.0
7615	1983	Coal	Springhill, Cumberland County		22.0
7616	1983	Coal	Springhill, Cumberland County		20.0
7617	1983	Coal	Springhill, Cumberland County		5.0
7618	1983	Coal	Springhill, Cumberland County		34.0
7619	1983	Coal	Springhill, Cumberland County		33.19
7620	1983	Coal	Springhill, Cumberland County		36.90
7621	1983	Coal	Springhill, Cumberland County		19.00
7622	1983	Coal	Springhill, Cumberland County		18.73
7623	1983	Coal	Springhill, Cumberland County		21.60
7624	1983	Coal	Springhill, Cumberland County		18.72
7625	1983	Coal	Springhill, Cumberland County		15.29
7626	1983	Coal	Springhill, Cumberland County		22.39
7627	1983	Coal	Springhill, Cumberland County		26.28
7628	1983	Coal	Springhill, Cumberland County		25.81
7629	1983	Coal	Springhill, Cumberland County		11.60
7630	1983	Coal	Springhill, Cumberland County		16.45
7631	1983	Coal	Springhill, Cumberland County		69.64
7632	1983	Coal	Springhill, Cumberland County		177.91
7633	1983	Coal	Springhill, Cumberland County		56.78
7634	1983	Coal	Springhill, Cumberland County		10.0
7635	1983	Coal	Springhill, Cumberland County		7.5
7636	1983	Coal	Springhill, Cumberland County		11.0
7637	1983	Coal	Springhill, Cumberland County		7.0

Record No.	Date of Boring	Object of Boring	Location of Borehole	Depth	
				Feet	Metres
7638	1983	Coal	Springhill, Cumberland County		7.5
7639	1983	Coal	Springhill, Cumberland County		7.0
7640	1983	Coal	Springhill, Cumberland County		7.0
7641	1983	Coal	Springhill, Cumberland County		7.0
7642	1983	Coal	Springhill, Cumberland County		6.0
7643	1983	Coal	Springhill, Cumberland County		8.0
7644	1983	Coal	New Glasgow, Pictou County		1017.1
7645	1983	Coal	New Glasgow, Pictou County		487.6
7646	1983	Geological information	Holland Harbour, Guysborough County	442.0	
7647	1983	Geological information	Holland Harbour, Guysborough County	336.0	
7648	1983	Geological information	Holland Harbour, Guysborough County	956.0	
7649	1983	Cretaceous deposits	Upper Musquodoboit, Halifax County		197.0
7650	1983	Cretaceous deposits	Upper Stewiacke, Colchester County		35.0
7651	1983	Cretaceous deposits	Upper Stewiacke, Colchester County		47.0
7652	1983	Cretaceous deposits	Upper Stewiacke, Colchester County		123.0
7653	1983	Cretaceous deposits	Iron Mines, Inverness County		56.0
7654	1983	Cretaceous deposits	Iron Mines, Inverness County		74.0
7655	1983	Cretaceous deposits	Blues Mills, Inverness County		130.0
7656	1983	Geological information	Glen Road, Antigonish County		846.7
7657	1983	Geological information	College Grant, Antigonish County		199.0
7658	1983	Geological information	College Grant, Antigonish County		49.4
7659	1983	Geological information	College Grant, Antigonish County		150.6
7660	1983	Coal	Donkin, Cape Breton County		109.0
7661	1983	Coal	Donkin, Cape Breton County		19.0
7662	1983	Coal	Donkin, Cape Breton County		132.0
7663	1983	Coal	Donkin, Cape Breton County		34.0
7664	1983	Coal	Donkin, Cape Breton County		52.0
7665	1983	Geological information	Point Edward, Cape Breton County		754.3

APPENDIX II

RECORD OF DRILLHOLES

BY

CLAIM MAP

RECORD OF DRILLHOLES BY CLAIM MAP

Claim Map 11E/02C

Location of Drillhole(s): Upper Stewiacke, Colchester County
Drilling Objective: Cretaceous deposits

Tract 61 Claim(s) E Record Number(s) 7650,7651

Tract 84 Claim(s) E Record Number(s) 7652

Claim Map 11E/03A

Location of Drillhole(s): Upper Musquodoboit, Halifax County
Drilling Objective: Cretaceous deposits

Tract 95 Claim(s) G Record Number(s) 7649

Claim Map 11E/08D

Location of Drillhole(s): College Grant, Antigonish County
Drilling Objective: Geological information

Tract 21 Claim(s) L Record Number(s) 7659
P 7657,7658

Claim Map 11E/09A

Location of Drillhole(s): Glen Road, Antigonish County
Drilling Objective: Geological information

Tract 47 Claim(s) K Record Number(s) 7656

Claim Map 11E/10A

Location of Drillhole(s): New Glasgow, Pictou County
Drilling Objective: Coal

Tract 63 Claim(s) E Record Number(s) 7645

Tract 65 Claim(s) O Record Number(s) 7644

Claim Map 11F/04B

Location of Drillhole(s): Holland Harbour, Guysborough County
Drilling Objective: Geological information

Tract 74 Claim(s) E Record Number(s) 7646,7647

Tract 75 Claim(s) J Record Number(s) 7648

Claim Map 11F/14D

Location of Drillhole(s): Iron Mines, Inverness County
Drilling Objective: Cretaceous deposits

Tract 56	Claim(s)	J	Record Number(s)	7654
		P		7653

Location of Drillholes: Blues Mills, Inverness County
Drilling Objective: Cretaceous deposits

Tract 35	Claim(s)	L	Record Number(s)	7655

Claim Map 11J/04C

Location of Drillhole(s): Donkin, Cape Breton County
Drilling Objective: Coal

Tract 41	Claim(s)	K	Record Number(s)	7662
		N		7664
		P		7663
Tract 42	Claim(s)	Q	Record Number(s)	7660, 7661

Claim Map 11K/01C

Location of Drillhole(s): Point Edward, Cape Breton County
Drilling Objective: Geological information

Tract 25	Claim(s)	K	Record Number(s)	7665

Claim Map 21H/09D

Location of Drillhole(s): Springhill, Cumberland County
Drilling Objective: Coal

Tract 4	Claim(s)	C	Record Number(s)	7631
		G		7621-7626
Tract 21	Claim(s)	B	Record Number(s)	7590-7592,7637, 7643
		C		7593,7596-7599, 7612,7613,7618, 7628,7629, 7634-7636
		F		7594,7595, 7600-7603,7619, 7638,7639
		G		7604-7611,7620, 7627,7640-7642
		K		7614-7617,7630
Tract 28	Claim(s)	J	Record Number(s)	7633
		P		7632